ENCLOSURE A

SUMMARY OF
U.S. NUCLEAR REGULATORY COMMISSION/U.S. DEPARTMENT OF ENERGY
QUARTERLY MANAGEMENT MEETING
April 30, 2003

Introduction:

The U.S. Nuclear Regulatory Commission (NRC) and U.S. Department of Energy (DOE) held a public Quarterly Management Meeting for the Yucca Mountain Project (YMP) on April 30, 2003. The meeting was held at the DOE Office of Repository Development (ORD) in Las Vegas, Nevada. Video connections were established with the NRC in Rockville, Maryland, and the Center for Nuclear Waste Regulatory Analyses (CNWRA) in San Antonio, Texas. Audio connections were also made available. Participants included representatives from the NRC, DOE, Bechtel SAIC Co. LLC (BSC), State of Nevada, Affected Units of Local Government, Nuclear Energy Institute, and members of the public. Copies of the agenda and a list of attendees are attached as Enclosures 1 and 2, respectively.

Program & Project Update

Dr. Margaret Chu, Director of DOE's Office of Civilian Radioactive Waste Management (OCRWM), opened the meeting by discussing that the fiscal year (FY) 2003 budget received after five months of a continuing resolution was a very significant reduction from the requested budget and requires some project efforts to be reduced and some to be deferred. Dr. Chu emphasized that the near-term program goal was unchanged - to submit a high quality License Application (LA) to the NRC in December of 2004. A key challenge for DOE is to change the program focus from site investigation to that of an enterprise with a nuclear safety culture. The Management Improvement Initiative (MII) was started in response to several previous management assessments to make improvements. Dr. Chu determined that the root cause of past difficulties was the area of roles, responsibilities, authority, and accountability (R2A2) and stated that the R2A2 of program management has been clarified in a reorganization and establishment of a new leadership team. In addition, the OCRWM Final Phase 3 Program Manual sets expectations for accountability for managers. DOE and BSC initiated rolling quality focus meetings (meetings conducted by successive levels of management) to clearly communicate quality expectations to the entire organization and the ORD Monthly Operating Reviews (MOR) provide issue identification, integration of activities, and provide for proactive and effective planning. A Licensing Support Network (LSN) contractor is on board with experience in electronic document databases. Dr. Chu noted that the Quality Assurance (QA) area needs considerable management attention and that she is seeing encouraging signs in culture improvement.

John Arthur, Deputy Director for ORD, outlined recent accomplishments since the last meeting: 1) issued the Quality Assurance Requirements and Description (QARD) revision 13; 2) added management emphasis on Corrective Action Reports (CAR) on models and software that will lead to closure by early this fall; 3) issued the OCRWM Final Phase 3 Program Manual and established a management committee to follow and answer questions on its implementation; and 4) a revision to the procedure for procedure preparation and approval (AP-5.1Q), key to other quality procedures, is in review. He observed that better quality in work and implementation of activities at the site had been achieved as a result of the stand down in

response to electrical safety concerns. Mr. Arthur also mentioned issues regarding recent employee concerns and root cause analysis for procedural noncompliance. He also identified the need to implement trending reports for each operating unit.

Mr. Arthur, along with John Mitchell, BSC President and General Manager, discussed the replanning that is necessary because the final FY 2003 funding authorization was less than requested from Congress. The top priorities during this effort were to address employee and public health and safety, comply with permit requirements, and perform the work to enable submission of a complete and quality LA to the NRC in December 2004. The replan is a complete rebaseline of the program for the rest of 2003 and 2004 (and beyond in selected areas) and results in work focused on requirements and supporting a smaller repository site footprint in the near term. More resources and emphasis will be applied to engineering design. Other areas, such as site access and tours may become more limited. DOE plans to make a decision by June 1 on site downsizing. NRC pointed out the need to make the planning documentation transparent to NRC for their examination and to discuss program plans. DOE agreed.

Mr. Arthur showed a portion of the draft Yucca Mountain Integrated Decision Schedule (Enclosure 3), which combines the critical paths required in the program elements to open and operate a repository at Yucca Mountain. A complete draft of this schedule is expected to be available by July 2003. Mr. Arthur also described that the MOR presents the ORD status for quality, schedule, and cost performance, and he presented samples from a previous MOR (Enclosure 3). The performance measures in some areas are maturing and some are still evolving. He discussed the status of the five MII areas shown on the exhibit. He also noted that DOE is working on an efficient and effective way to address the Key Technical Issues (KTI) and that the number of technical interactions with the NRC has been increased. There will be a management assessment of the overall program along with employee surveys relative to the Safety Conscious Work Environment (SCWE) and other areas later this year followed by an independent evaluation of the program performance. John Greeves, Director of NRC's Division of Waste Management, observed that the most recent Quality Assurance Management Assessment (QAMA) report was received in January 2003. Previous reports were actually delivered in September or October. The cover page indicates the QA program was adequate and effective. However, the report presents a different conclusion. He stated that any new independent evaluation needs to be timely and not performed by DOE.

Janet Schlueter (NRC) provided an NRC program update since the last meeting. The draft final Yucca Mountain Review Plan (YMRP) was released for public information in March 2003 and is with the Commissioners for action. Specific responses to several DOE KTI-related submittals using risk information have been provided, along with NRC comments on the DOE risk prioritization report and letter on sensitivity analyses. A public dialog is planned to discuss the DOE risk-informed approach to KTI agreements and the NRC responses to this approach. A status report on the KTIs has been provided to the Commission and a report is in preparation which will prioritize the KTI agreements. Additional interactions on the KTIs are needed and the DOE timeline for design is needed to determine appropriate times for interactions on design. NRC is working to provide timely responses to DOE KTI-related submittals and looking for ways to share the response schedule with DOE. Advisory Committee on Nuclear Waste (ACNW) meetings and workshops have been enhanced by participation of the NRC, DOE, State of Nevada, and other stakeholders. Also, NRC has a new business integration process manager for Licensing Support Network (LSN) matters.

Presentations

Mr. R. Dennis Brown, OCRWM Director of Quality Assurance, provided a summary of the subjects discussed during the quarterly QA meeting held April 29, 2003. He indicated resolving QA problems will take up to one year and requested patience with the process and cited recent positive QA program implementation outcomes and improved timelines to complete corrective actions. Susan Lynch (State of Nevada) asked if new QA procedures would be used to review old data collected under previous procedures. Mr. Brown stated the old data previously qualified will be re-examined to make sure new requirements are met.

Mr. Mitchell provided a discussion of the performance indicators for the program (Enclosure 4). The project has numerous metrics and indicators. One set of performance indicators for the program is needed which uses readily available data. These performance indicators are an essential management tool which is used to evaluate performance at various levels. Currently, a team is establishing a structure for a single set of indicators and screening criteria for indicators and metrics (including those currently in use) to be used. The goal is to establish this single set of performance indicators by September 2003. The current MII indicators being used were discussed (Enclosure 5). These indicators will be considered for the single project set of performance indicators. Wes Patrick (CNWRA) asked if effectiveness indicators will measure recurring problems. Mr. Mitchell responded that the trending program will look at repeated occurrences.

Nancy Williams (BSC) presented a management initiative on data (Enclosure 6). Line management determined that this initiative is needed to provide full confidence in the integrity and defensibility of data used in models used as input to the LA. These data must be qualified, traceable, retrievable, and appropriate to their application. The use and integrity of these data will be reviewed considering technical and process issues identified with data in the past. Teams are being assembled to conduct this review in conjunction with the technical document authors with a goal for completion by December 2003. NRC inquired if a similar effort is appropriate for computer software; DOE responded that the corrective actions for the existing software CAR and the ongoing independent validation and verification of all software used for the LA provides confidence in software adequacy. Mr. Greeves (NRC) stated that inspecting quality in was not the direction that DOE wanted to go.

Subsequent to DOE's presentation on data qualification, Mr. John Greeves (NRC) provided the following comments on the NRC's concerns regarding DOE's QA program implementation. These comments included the overall view that a fundamental change in the project's safety culture (i.e., behavior change) is still needed. Although some management change has taken place, behavior improvement has not yet been achieved based on recent events. The ability to effectively manage change starts at the top and flows down. On this project the track record shows schedule pressure overrides quality and the result is to work around the issue rather than solve it.

Historically, DOE has had recurring problems regarding implementation of its QA program. The nuclear industry learned the lessons of the 1980's at projects, such as, Marble Hill, Midland, Zimmer and South Texas. The Yucca Mountain Project did not learn the lessons of the past. Policy statements from previous managers about a sense of urgency to ensure full compliance and the need for a nuclear safety culture and behavior, were not achieved. This

was caused by lack of management and staff accountability, and ineffective corrective action. Examples include the Site Characterization Analysis provided in August 1989, which identified QA problems, and the letter from R. M. Bernero (NRC) to Dan Dreyfus (DOE) in October 1994 that identified QA concerns. Additionally, QAMA reports over several years identified recurring QA problems.

In the past, DOE has attempted to implement initiatives intended to correct these problems but failed to follow through. The most recent example occurred in May 2001, when the staff identified technical errors and inconsistencies in Total System Performance Assessment - Site Recommendation (TSPA-SR) documents submitted to NRC for review and acceptance. Additional examples of where DOE's QA program failed to build quality into DOE products include CAR BSC-01-C-001, Model Validation, initiated in May 2001 (open for 725 days), and CAR BSC-01-C-002, Software, initiated in June 2001, (open for 685 days) both of which required multi-discipline teams to perform horizontal reviews, vertical reviews, and root cause evaluations. As a result of these reviews DOE identified numerous errors in these technical products.

DOE delivered its OCRWM Management Improvement Initiative (OMII) and subsequently developed the current MII in July of 2002, which was to be a comprehensive corrective action plan. However, the MII has not yet resulted in improved outcomes, and the Enhanced Effectiveness Indicators do not all reflect QA program "effectiveness."

Problems are still recurring as indicated in BSC's QA surveillance BSCQA-02-S-16, which found that the independent verification and validation process is not effective in ensuring repeatability of baseline software. Furthermore, DOE's Office of Quality Assurance (OQA) issued a Stop Work Order and CAR 03-C-097 related to significant problems with the procedural development process in March 2003. DOE's OQA audit related to Data Verification performed in March 2003, was characterized as less than effective in the NRC staff's view and the findings were indeterminate. BSC QA also issued CAR 03-C-107 in March 2003 for recurring data problems and ineffective corrective actions. As a result of these issues, it will be difficult to implement an effective QA program and an effective corrective action program for the LA. To emphasize this issue, BSC has now self-identified the need and plans to transition from a QA program where quality is built into products, to an inspection program for data where quality will now be inspected into products to be a part of the LA.

Management of the Yucca Mountain Project has not demonstrated to date that it can achieve the improvements it has promised. In addition, DOE QA program implementation is not working effectively as demonstrated by CAR 03-C-097. Specifically, the root cause analysis for CAR 03-C-097 found that there was inadequate supervision, a lack of signature accountability and integrity, and personnel chose not to comply with procedures. In addition, recent Safety Conscious Work Environment (SCWE) issues indicate that there may be a chilling effect on problem identification. If DOE is not successful in fostering an effective SCWE, project personnel will be reluctant to raise safety issues.

The NRC is looking for positive outcomes (performance) as noted in Mr. Martin Vigilio's letter dated Oct 3, 2002, to Dr. Margaret Chu in response to the DOE's MII. The MII has not yet produced the anticipated improvements and CAR 03-C-097 is a striking example of the lack of improvement in safety culture and behavior change. Management's evaluation and early indications of accountability are a step in demonstrating that they are holding management and

staff accountable for improper actions.

The bottom line is that an effective safety culture (i.e., behavior change) is still needed. Some management change has taken place, however behavior change has not yet been achieved. The ability to manage change well starts at the top and flows down. A track record that shows schedule pressures overrun quality has to be changed. John Mitchell's report on follow up to CAR 03-C-097 shows promise that management will hold themselves and staff accountable. However, one case of walking the talk is not yet a trend. Therefore, within the next 30 days, the NRC requests that DOE send a letter, addressed to Mr. Virgilio, telling NRC what DOE will do differently to assure that DOE corrects its Program Management problems. DOE responded that major changes occurred last fall and time is needed to fix problems and see results.

The next presentation was by Joseph Ziegler (DOE), who provided the progress toward the LA (Enclosure 7). Interactions with NRC are necessary to reach a common understanding of important issues and their resolution and interactions have been scheduled for 2003 consistent with the associated DOE products being produced. DOE shares the NRC concern with the "bow wave" of KTI-related submittals and is working to provide submittals in an efficient manner. DOE is pleased that the final draft YMRP was released and needs the final YMRP as soon as possible so the LA can be made consistent with it in an efficient manner. Meanwhile, DOE is using the final draft to guide LA preparation. He stated that a Technical Exchange is scheduled to discuss aircraft hazards. Future interactions with the NRC are needed to discuss LSN matters and the use of burn-up credit in criticality work. He discussed the status of certain project work elements needed for the LA that are receiving increased management attention to achieve completion, such as the surface design and the Engineered Barrier System environment.

Timothy Gunter (DOE) presented an overview of the KTI status (Enclosure 8). DOE will address all the KTI agreements by the time of LA submission. The replanning effort just completed will be reviewed for the effect on the submittal schedule and DOE will be available to discuss any schedule changes by June 2003. Of the 151 agreements completely or partially submitted to date, NRC staff has responded that 35 agreements currently need additional information prior to competing the agreement, 13 are currently being reviewed by NRC staff, and 77 have been closed by NRC as of April 21, 2003. Process improvements are being implemented for the preparation and delivery of KTI agreement responses. These include procedure revisions resulting from a self-assessment of a previous submittal and conduct of a Six Sigma evaluation. In response to an NRC question, Mr. Gunter said that the self assessment for two KTI agreements did not result in issuing a deficiency report (DR) because models and results were not affected by discrepancies found in the agreement submittals. These discrepancies were documented in the Condition/Issue Identification & Reporting/Resolution (CIRS) system. DOE is analyzing logical grouping of KTI agreements in the same technical area for combined submittal. This approach would cover most of the remaining agreements and offer efficiency in DOE preparation and submittal. Mr. Gunter described the status of a revised response to several specific KTI agreements. DOE is delaying submittal of responses to KTI agreements using a risk-informed approach until the results of the planned May 15, 2003 NRC interaction can be included in these responses.

Public Comments

A representative of the Las Vegas Paiute Tribe thanked the NRC for keeping them informed on Yucca Mountain and stated that the Tribe had decided to apply to DOE for affected Indian tribe status.

Closing Remarks

DOE and NRC expressed appreciation for the meeting. The next meeting was proposed for July 23-24, 2003 in Rockville, MD subject to personnel availability.

Date: 5/15/03

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